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MONTHLY REPORT

1 MARCH - 31 MARCH 1959

INSTALLATION AND MAINTENANCE BRANCH OC-E

ENGINEERING STAFF

1. Preventative maintenance and trouble calls consumed the majority of time of the branch this month. Comparing our T.O. and personnel available for normal duty we found that we were at half strength, due to personnel processing for overseas, departures, and attending technical training courses.

2. The [REDACTED] Signal Center is being expanded. Equipment was rearranged and rewired. A maintenance area was obtained which will provide more efficient maintenance.

3. Four KW-26 racks were fabricated at the Curie Hall shop and are ready for installation. T & I was performed on 6 KW-26B units at the rehabilitation shop at [REDACTED] prior to shipment.

4. Two new Electronic Technicians reported on duty during this reporting period. Two men departed for overseas assignments and fourteen men are in process for overseas assignments.

[REDACTED]  
Chief, Installation & Maintenance Branch, OC-E

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I WIRE MAINTENANCE SECTION

A. Trouble Reports

1. The Wire Maintenance Shops in the Washington Area have reported a total of two hundred and forty seven troubles for the month of March. The troubles broken down for the different locations are as follows:

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Signal Center	160
[REDACTED]	42
OCI	29
Outside Area	16

B. Daily Activities

1. Installations in the Signal Center, [REDACTED] this month, consisted of an M-19 teletype table with a low base reperforator. This is an off-line unit used for running off spare copies and processing tapes. A Tiny Tot was installed in the Special Signal Center.

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2. Lines 10-GC-73 and 10-GC-74, which are terminated between the [REDACTED] Signal Center and [REDACTED] Signal Center have been balanced and checked out for 100 words per minute operation. These circuits will comprise the [REDACTED] circuit which is estimated to be completed on the 31st of March.

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3. Work has been started on the KW-26 circuit between [REDACTED] Signal Center and [REDACTED]. Space for this installation has been provided and channeling is being installed.

4. A conference was held with the radio control supervisors at the Pentagon. This was to obtain information as to how logs should be maintained and the terminology used by their technicians for requesting and locating circuit difficulties on future overseas circuits. This conference was very informative and we have initiated a system for maintaining logs which will be very similar to theirs.

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5. Four KW-26 racks have been fabricated and completed in the [REDACTED] Shop. Two units will comprise the [REDACTED] circuit and one will be used for the [REDACTED] circuit. The last will be for additional circuit requirements.

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6. The [REDACTED] Signal Center has been expanded. A wall was removed and additional floor space has been acquired. About thirty-five feet of channeling has been installed and twelve pieces of teletype equipment have been relocated and rewired. Arrangements have been

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made to send one Tiny Tot and a Sigtot, both off-line for this room. A Maintenance Area will be provided and maintenance bench and storage cabinet will be delivered.

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7. The Rehab Shop at the [REDACTED] Warehouse is back in operation. One man has been permanently assigned there as of the 24th of March.

8. Six Model 28 Printers have been checked out in the Rehab. Shop for shipment to Florida.

9. Modification kits were received from Teletype Corporation for the Model 28 Reperforator main shafts and the A.S.R. Perforator shafts. Considerable troubles have been encountered with the main shafts freezing up on these units. Kits are being stalled on all units in service in the Washington area.

10. The only trouble encountered this month on the KW-26 equipment was a bad regulator tube in the power supply. Bi-monthly preventative maintenance is still being performed on these units. This equipment has stabilized itself very well.

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[REDACTED]  
The Wire Maintenance Section had one man on duty at Project [REDACTED] during the month of March. A total of forty-six hours were used in clearing troubles and preventative maintenance.

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## II ELECTRONIC MAINTENANCE SECTION

### A. Microwave

1. Regular maintenance visits were made to both microwave installations. Minor defects noted were repaired.

2. No trouble calls were received for this period, but a preventive maintenance visit to Station "RJ" revealed that the main unit R.F. carrier was unstable. A tube was replaced in the auxilliary video amplifier used with the Station "J" equipment.

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3. The microwave system levels were adjusted between Station "J", Station "RJ" and [REDACTED]

### B. Washington Disaster Plan

1. Regular maintenance visits were made to [REDACTED] Room 2, and to one car of the Security Office V.H.F. Net.

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2. No trouble calls were received for this period.

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25X1A5a1 3. Motorola antenna coupling units, P-9012, have been installed on the two receivers of the 250 watt base station equipment located in Room 2, [REDACTED]. These units are designed to overcome the effective loss in sensitivity normally encountered when two or more receivers are operated from a common antenna. If these units prove to be satisfactory we will install the same type of the 60 watt base station equipment at Station B.

4. It has been requested that funds in the amount of \$6,100.00 be made available to G.S.A. to cover the repair cost estimate of the Trylon towers. G.S.A. has released the invitation to bid forms, and two contractors have been shown the tower sites.

C. KY-1 Voice Privacy System

1. Four trouble calls were reported on the CIA Internal Net, and the CIA White House System. Listed below are two trouble calls encountered in which the units were inoperative for more than the normal repair time.

a. Trouble was reported on the White House KY-1 Units located in the DCI's office. After a great deal of checking the trouble was found to be in the switchboard located at the White House. Minor troubles were also found, and corrected in our equipment.

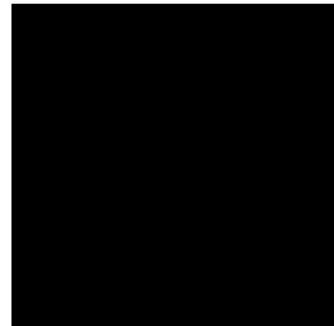
25X1A5a1 b. Another trouble was located in the telephone company switchboard located in Room 1013 [REDACTED]. The telephone company was notified and the switchboard has been repaired.

1. The KY-1 subscriber list has been received from the Americas Division, and is listed below. Arrangements have been made to deliver KY-1 units to those offices marked by an asterisk. The delivery date will be 3 April 1959.

OFFICE

LOCATION

DDI-OCI  
\*DD/P-COPS  
DD/P-ADDP/PP  
DD/P- Project [REDACTED]  
DD/P- Project [REDACTED]  
\*DD/P-C/FE  
\*DD/P-C/NE  
\*DD/P-C/WH  
\*DD/S-D/Sec.  
\*DD/P



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3. KY-1 units have been delivered to Room 546, [REDACTED] and to Room 4E1085, Pentagon, but the telephone lines have not been installed.

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4. It should be noted that it will be sometime before the KY-1 units can be put into operation, for telephone lines have to be installed and modifications made on the KY-1 Office wiring.

5. Two KY-1 units have been loaned to the Lab. at [REDACTED] for the development of a modification to eliminate the press-to-talk button. To allow more time for this development, these units have been scheduled to be placed in Room 2505 [REDACTED] and Room [REDACTED] Building.

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6. We are in the process of modifying eight handsets so that they maybe used as extensions.

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7. The KY-1 switchboard automatic register readings for the period 26 February to 27 March 1959 are as follows:

NIC	141 calls
Signal Center	49 calls
DDI	39 calls
SPS/AFB	349 calls

A total of 1326 calls were counted for this period.

8. The calls counted for NIC and SPS/AFB are high because they were used as test points when trouble was encountered on the KY-1 switchboard.

#### D. 6ST Equipment

1. We have replaced all oscillator-modulator units, discriminator units and the isokay filters used in the transmitters and receivers of the A.F.C. equipment. Preliminary tests indicate that these components are operating normally, but extensive tests can not be conducted because we are experiencing difficulty in the A.F.C. Chassis Jones Plug connectors. The pin connections appeared to be setting up a resistive path which attenuates the multiplex signal. Since it is not feasible to replace all of the Jones Plugs, audio type connectors and cable have been procured. We are in the process of bypassing the audio multiplexed tone portion of the Jones-Plugs with the new connectors and cables.

#### E. AS-4A and Associated Equipment

1. The cable connecting the buffer stage to the Potter Printer has been extended, and placed in the wiring duct. This completes the installation in Room 1208 [REDACTED]

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2. Two extra air conditioners were installed in Room [REDACTED] Building, but they do not appear to be adequate. Temperature readings have been taken, and with all equipment turned off the temperature rises to about eighty degrees. With all equipment in use the temperature rises to about ninety degrees depending on the outside temperature.

3. A modification has been performed on the Soroban which prevents the Soroban motors from turning on automatically when a - 100 volt power supply failure occurs.

4. A modification which provides the following is being installed on the KX-3's, per KAB-32 T/SEC, Modification #3.

- a. Insures the proper action for random injection control.
- b. Improves operation of the frequency processing circuits.
- c. Improves the operation of the framing interval circuits.

5. N.S.A. was able to supply us with a technician to checkout the KX-3's and to give us technical advice. The equipment has been repaired, but they have required quite a bit of servicing.

6. We have scheduled shift work to enable a technician to be available during the hours of actual operation.

#### F. Special Projects

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1. The installation of the [REDACTED] equipment in the Willys Jeep for the Office of Security has not been completed. The Leece-Neville alternating equipment that we received was of the wrong type. We have procured the correct items with the exception of an installation kit, which had to be ordered from the manufacturer. It is hoped that the kit will be available the first part of April.

2. The following equipment has been repaired.

- a. 1 each PRC-6 Trans/Receiver.
- b. 3 each RA-6 power supply.
- c. 2 each RP-6 power supply.
- d. 2 each RR-6 Receiver.

3. Systems 2 equipment was set up and demonstrated at the [REDACTED] Warehouse. A technician was available during the demonstration to answer questions.

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#### III MECHANICAL MAINTENANCE SECTION

A. Preventative maintenance was performed on all emergency power generators as scheduled each Friday.

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B. Instructed [REDACTED] personnel in the operation of generators at [REDACTED]. Gave four hours instruction in the operation and adjustment of a 750 watt Kohler generator to prospective operator of a one man station.

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C. Repaired P.E. 162-C damaged in drop test.

IV BRANCH SUPPLY

A. Requisitions and Property Turn Ins

1. Equipment ordered this month as requested by OC-E/IMB is as follows:

a. The Wire Maintenance Section requested one Model 19 teletypewriter set, one Model 14 Reperforator, two Par Metal racks, RR-197, one Model 28 teletypewriter set, and one Tiny Tot teletypewriter set at a total cost of \$8,338.68.

b. The Electronic Maintenance Section requested one Frequency Converter, one TU-576 Signal Generator, one Peaking Generator and three microphones at a total cost of \$969.70.

2. Ten requisitions consisting of 147 line items were processed for field shipment at a total cost of \$2,320.35.

3. As of 25 March \$45,624.55 has been expended for spare parts required to maintain stock levels for equipment serviced by OC-E/IMB and to fill requests by the field stations.  
Report of Error: The money expended for spare parts, as of 25 February should have read \$35,355.21.

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4. [REDACTED] Transistor Testers at a total cost of \$980.00 were ordered. The requisition was forwarded to OC-E/R&D to accompany a cover letter.

5. Cable for the disseminator circuit at [REDACTED] has been ordered from Western Electric.

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B. Cryptographic Material and Equipment

1. A spare parts list for the KL-47 is being prepared, this list will be broken down into three categories indicating where the items may be obtained; stock, general procurement, and N.S.A.

2. The parts list indicating the source of availability for the KW-26 has been completed. Items which can be obtained from general procurement have been requested for warehouse stock. Items which must be procured from N.S.A. will be screened by the Wire Maintenance Section before the requisition is made.

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C. Tiny Tot

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1. Seven Control boxes and eight Number two Modification kits were assembled and shipped to [REDACTED] Nineteen matched resistor sets were made up for stock. Twelve were shipped to [REDACTED]

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D. [REDACTED]

1. The cable and the terminal blocks necessary to fabricate four racks have been ordered.

E. Other Activities

1. Model 28 ASR, TD, and Reperforator: Spare Parts

A total of 428 line items were received this month. Prices were adjusted, parts stocked and location cards made. As of 25 March 687 line items have been received, this leaves a total of 185 line items still outstanding.

2. Line Feed Counter

There was no action on the Line Feed Counter this month.

3. The two hundred nine line items ordered as spare parts for the flexowriter have been received. Parts were stocked and location cards made.

ADMINISTRATIVE

EOD

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[REDACTED]

Elect. Tech.

16 March 1959

Elect. Tech.

16 March 1959

PROCESSING

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[REDACTED]

[REDACTED]

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PCS

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TRAINING

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OJT

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2 March - 31 March  
2 March - 31 March  
2 March - 31 March  
1 March - 20 March  
1 March - 20 March  
1 March - 20 March  
1 March - 20 March  
1 March - 31 March  
23 March - 31 March  
23 March - 31 March

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KW-26  
TTY

9 March - 31 March  
16 March - 31 March

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